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Water Supply Outlook For Nevada



SOIL CONSERVATION SERVICE
U.S. DEPARTMENT OF AGRICULTURE

Cooperating with

NEVADA DEPARTMENT of CONSERVATION
AND NATURAL RESOURCES
DIVISION OF WATER RESOURCES

AS OF
JAN. 1, 1982

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO: LONE CONE, NEAR NORWOOD, COLORADO, BLANKETED BY ITS WINTER MANTLE OF SNOW.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, Federal Building, 230 N. First Ave., Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno, Nevada 89505
Oregon	1220 S. W. Third Ave., Portland, Oregon 97204
Utah	4420 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Snow Surveys Branch, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 --- for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 --- and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta T3C 1A6.



WATER SUPPLY OUTLOOK FOR NEVADA

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by
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|||||

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In Cooperation with
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Report prepared by
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TABLE OF CONTENTS

WATER SUPPLY OUTLOOK FOR NEVADA	1-2
NEVADA STREAMFLOW FORECASTS	3
SATELLITE SNOW COVER MAP	
TAHOE-TRUCKEE, CARSON AND WALKER BASINS	4
HUMBOLDT RIVER ABOVE COMUS, NEVADA.	5
RESERVOIR STORAGE	6
SNOW COURSE MEASUREMENTS (Soil Conservation Service).	7
SNOW COURSE MEASUREMENTS (Desert Research Institute).	8
PRECIPITATION MEASUREMENTS (Soil Conservation Service).	9-11
PRECIPITATION MEASUREMENTS (National Weather Service)	12
SNOTEL MEASUREMENTS GRAPHS	
WARD CREEK #3 and MT. ROSE SKI AREA	13
EBBETTS PASS and DORSEY BASIN	14

All averages are for 1963-77 period.

WATER SUPPLY OUTLOOK FOR NEVADA

SNOW MEASUREMENTS

A limited number of manual snow course measurements were scheduled for the January 1, 1982 report. Stormy weather prevented access to several of the snow courses. Therefore, snowpack information, for this report, came from the SNOTEL system's snow water content and total precipitation data in addition to the manual readings.

The data in this report is for January 1, 1982. A large amount of snowfall occurred from January 1 to January 5, 1982. This has increased the snowpack water content average nearly 5.0 inches in the Sierra and 1.0 to 1.5 inches in Northern and Eastern Nevada.

The January 1, 1982 snowpack is about 120% of average in the Tahoe-Truckee Basin, 130% in the Carson-Walker Basin, and 140% in the Humboldt, Snake, and other basins in Nevada.

The snowpack is nearly four times greater than this time last year. The high elevation snowpack has been increasing during November and December while the middle and lower zones have been below average due to the frequent warm storms that occurred. There was little snowpack in the lower zones until the end of December.

Precipitation amounts at the SNOTEL sites have been exceptionally high in the Sierra during October 1, 1981 to January 1, 1982. Total amounts for this period range from 11.3 inches at Lobdell Lake in the Walker Basin to 61.8 inches at Ward Creek #3 in the Tahoe Basin.

The Snow Cover Maps, in this report, were prepared from an imagery taken on the only cloud-free day since December 22, 1981.

RESERVOIR STORAGE

Reservoir storage has increased significantly since October 1, 1981, but 82% is below average for this time of year. The large increase is because of the large amount of precipitation in November and December. Lake Tahoe has increased from 183,000 acre feet of useable storage to 370,000 acre feet.

The combined total of seven major reservoirs, affecting the State's water supply, is now 688,000 acre feet. This is an increase of 330,000 acre feet since October 1, 1981. The average increase during this period is 58,000 acre feet.

Forecasts for this summer's streamflow are above average. These forecasts are based on average precipitation for the remainder of the season.

SNOTEL

The SNOTEL system is now in its second year of full operation. There are now nearly five hundred (500) remote sites in the Western United States collecting, everyday, the amount of snow water, precipitation, and temperatures. Fifty of these sites are under Nevada's jurisdiction and are located in the State and the Sierra East Slope. New sites added this year are Jacks Peak, in Elko County, Big Meadows, in Washoe County, and the Central Sierra Snow Lab, near Soda Springs, California. This automatic data collection system provides more timely data than manual measurements. In the future there will be greater emphasis on this data with decreasing emphasis on manual measurements.

STREAMFLOW FORECASTS (Thousand Acre Feet) as of: January 1, 1982

Forecasts are based on snow-water presently stored in the mountain watersheds and the assumption that precipitation will be near average throughout the forecast period. Peak flow forecasts indicate the most probable range for the maximum average 24-hour flow. All averages are for 1963-77 period.

FORECAST POINT	Forecast Period	Forecast This Year	This Year as Percent of Average	Average †
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TRUCKEE RIVER

Truckee River at Farad, CA _{1/}	April-July	375	137	273
Lake Tahoe Rise in Feet (assuming gates closed)	April 1 to high	2.00	141	1.42
Little Truckee River above Boca, CA	April-July	120	140	86

CARSON RIVER

East Carson near Gardnerville, NV	April-July	265	142	187
West Carson at Woodfords, CA	April-July	75	142	53
Carson River near Carson City, NV	April-July	260	142	183
Carson near Fort Churchill, NV	April-July	245	147	167

WALKER RIVER

East Walker near Bridgeport, CA _{2/}	April-Aug.	90	130	69
West Walker below Little Walker near Coleville, CA	April-July	200	137	146

HUMBOLDT

Lamoille Creek near Lamoille, NV.	April-July	32	110	29
S. Fork Humboldt above Dixie Creek, NV	April-July	80	110	73
Marys River above Hot Springs, NV.	April-July	42	114	37
N. Fork Humboldt at Devils Gate, NV.	April-July	40	114	35
Humboldt River at Palisade, NV.	April-July	250	113	221
Humboldt River at Comus, NV.	April-July	200	112	178
Martin Creek near Paradise, NV.	April-July	20	133	15

SNAKE RIVER

Owyhee River near Gold Creek, NV _{3/}	April-July	25	109	23
Owyhee River near Owyhee, NV _{3/}	April-July	90	113	80

NOTE: Streamflow forecasts which appear in this bulletin are a coordinated activity of the National Weather Service and the Soil Conservation Service.

1/ Observed flow plus change in storage in Boca, Stampede and Prosser Reservoirs, Donner, Independence and Martis Creek Lakes, and minus the flow at Truckee River at Tahoe City, California.

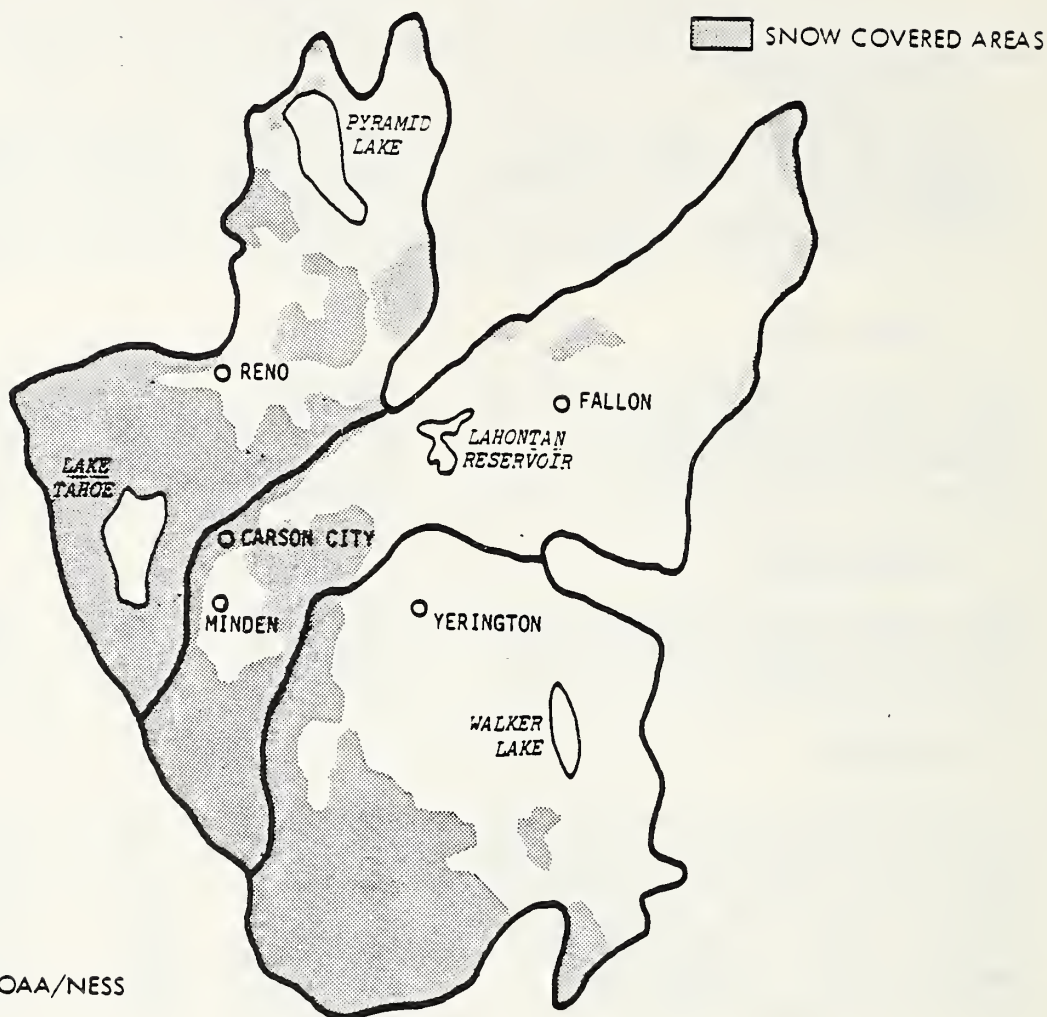
2/ Observed flow plus change in storage in Bridgeport Reservoir.

3/ Observed flow plus change in storage in Wild Horse Reservoir.

SATELLITE SNOW COVER

TAHOE-TRUCKEE, CARSON AND WALKER BASINS

JANUARY 1, 1982

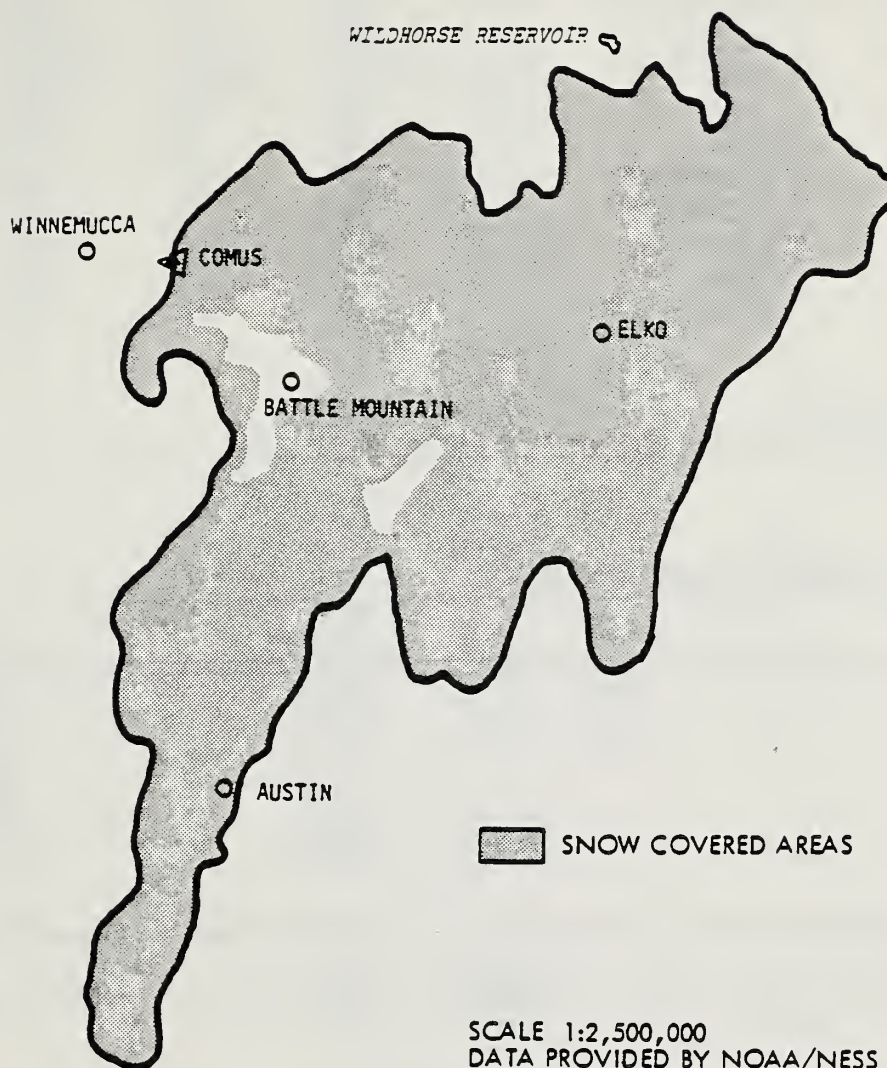


<u>BASIN</u>	<u>THIS YEAR</u>	<u>PERCENT SNOW COVER</u>	<u>LAST YEAR</u>	<u>PERCENT SNOW COVER</u>
TAHOE-TRUCKEE	November 29, 1981	56.0%	November 27, 1980	8.0%
	January 1, 1982	56.0%	December 28, 1980	11.0%
CARSON	November 29, 1981	30.0%	November 27, 1980	3.0%
	January 1, 1982	24.0%	December 28, 1980	6.0%
WALKER	November 29, 1981	77.0%	November 27, 1980	9.0%
	January 1, 1982	40.0%	December 28, 1980	11.0%

SATELLITE SNOW COVER

HUMBOLDT RIVER ABOVE COMUS, NEVADA

JANUARY 1, 1982



SCALE 1:2,500,000
DATA PROVIDED BY NOAA/NESS
WASHINGTON, D.C.

<u>THIS YEAR</u>	<u>PERCENT SNOW COVER</u>	<u>LAST YEAR</u>	<u>PERCENT SNOW COVER</u>
November 26, 1981	24.0%	November 27, 1980	43.0%
November 29, 1981	68.0%	December 1, 1980	35.0%
December 7, 1981	7.0%	December 8, 1980	57.0%
December 16, 1981	18.0%	December 14, 1980	38.0%
December 22, 1981	58.0%	December 23, 1980	11.0%
January 1, 1982	97.0%	December 26, 1980	4.0%

RESERVOIR STORAGE (Thousand Acre Feet) AS OF January 1, 1982

Basin or Stream	RESERVOIR	Usable Capacity	Usable Storage		
			This Year	Last Year	Average †
Owyhee	Wild Horse	72	23	48	29
Lower Humboldt	Rye Patch	172	57	153	106
Colorado	Mohave	1,810	1,575	1,576	1,589
Colorado	Mead	26,159	22,681	23,338	17,421
Tahoe	Tahoe	732	370	325	445
Truckee	Boca	41	33	19	19
Truckee	Stampede**	220	115	141	112*
Truckee	Prosser***	30	9	9	8
Carson	Lahontan	291	164	188	187
West Walker	Topaz	59	25	29	31
East Walker	Bridgeport	42	16	31	27

* Adjusted average.
 ** Storage began August 1, 1969.
 *** Flood Control use allocation of 20,000 acre-feet between November 1 and April 10.

TOTAL RESERVOIR STORAGE (Thousand Acre Feet)

MONTH	This Year	Last Year	Average †
October 1.	358	883	786
January 1	688	793	844
February 1		859	920
March 1		898	968
April 1		953	1,010
May 1		939	1,032

The above data developed from Wild Horse, Rye Patch, Tahoe, Boca, Lahontan, Topaz, and Bridgeport Reservoirs in 1,000 Acre-feet.
 TOTAL USABLE CAPACITY

PEAK FLOWS (MAXIMUM MEAN DAILY) (Av. flow for 24 hrs. on day of greatest flow)

FORECAST POINT	PEAK FLOW (SECOND FEET)	
	Forecast Range	Average †
No forecast issued January 1		

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
No forecast issued January 1			

† 1963-1977 period.

SNOW COURSE MEASUREMENTS

SNOW COURSE MEASUREMENTS		THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average †
TAHOE-TRUCKEE BASIN						
Big Meadows	8,300	01/01/82		15.9s	-----	-----
Donner Summit (CA)	6,900				4.0	15.3
Echo Peak (CA)	7,800	12/31/81		18.9s	4.6	17.8s
Echo Summit (CA)	7,450				3.3	13.0
Fallen Leaf (CA)	6,300	01/01/82		2.6s	0.0	4.0s
Freel Bench (CA)	7,300	01/03/82	25	4.6	0.0	5.4
Glenbrook #2	6,900	12/30/81	8	2.1	1.0	4.1
Hagan's Meadow (CA)	8,000	01/03/82	40	8.8	2.2	7.4
Heavenly Valley (CA)	8,800	12/31/81	50	14.8	3.3	11.8
Independence Camp (CA)	7,000	01/05/82		5.5s	2.8	8.1
Independence Creek (CA)	6,500	01/05/82		2.8s	1.1	5.0s
Independence Lake (CA)	8,450	01/01/82		27.3s	6.9	18.6s
Marlette Lake	8,000	01/01/82		13.0s	2.7	8.7
Mount Rose	9,000	01/01/82		20.4s	5.5	13.9s
Mount Rose Ski Area	8,850	12/29/81	82	33.3	7.9	17.2
Richardsons #2 (CA)	6,500	12/30/81	9	2.1	0.1	6.1
Rubicon #2 (CA)	7,500	01/01/82		14.3s	3.3	13.1s
Squaw Valley #2 (CA)	7,500				6.7	-----
Squaw Valley Gold Coast (CA)	8,200	01/01/82		34.3s	7.3s	18.5s
Tahoe City Cross (CA)	6,750	12/30/81	19	4.7	0.0	6.0
Truckee #2 (CA)	6,400	12/29/81	9	2.1	0.1	6.4s
Upper Truckee (CA)	6,400	01/03/82	20	3.5	0.0	4.4
Ward Creek #2 (CA)	7,000	12/29/81	47	13.7	4.3	13.0
Ward Creek #3 (CA)	6,750	01/01/82		11.5s	6.4	12.1
CARSON-WALKER BASIN						
Blue Lakes (CA)	8,000	01/01/82		16.1s	4.5	15.6s
Ebbetts Pass #2 (CA)	8,700	01/01/82		26.3s	5.4	16.1s
Leavitt Meadows (CA)	7,200	01/01/82		3.3s	1.0	3.0s
Lobdell Lake (CA)	9,200	01/01/82		10.4s	3.0	7.3s
Poison Flat #2 (CA)	7,900	N/R			2.6	-----
Sonora Pass (CA)	8,800	N/R			3.8	9.6
Sonora Pass Bridge (CA)	8,800	01/01/82		14.6s	3.8	10.0
Spratt Creek (CA)	6,100	01/01/82		1.2s	0.0	-----
Virginia Lakes (CA)	9,500	N/R			2.9	6.8
Virginia Lakes Ridge (CA)	9,200	01/01/82		9.6s	3.0	6.6
Wet Meadows #2 (CA)	8,050	01/01/82		20.5s	5.6	14.0s
NORTHERN GREAT BASIN						
Cedar Pass (CA)	7,100	01/01/82		7.4s	2.4s	8.1s
Oisaster Peak	6,500	01/01/82		9.9s	0.8s	5.4s
Dismal Swamp #2 (CA)	7,000	01/01/82		17.6s	6.7s	10.5s
SNAKE RIVER						
Bear Creek	7,800	01/01/82		11.7s	-----	8.1
Goat Creek	8,800	12/29/81	41	10.2	2.3	7.9
Pole Creek Ranger Station	8,330	12/29/81	39	10.8	4.0	9.1
Seventy Six Creek	7,100	01/01/82		8.7s	2.9s	5.3
OWYHEE RIVER						
Big Bend	6,700	01/01/82		4.5s	1.5s	5.0s
Fawn Creek	7,000	01/01/82		8.5s	2.9s	5.3s
Jack Creek, Upper	7,250	01/01/82		11.5s	3.2s	6.0s
Laurel Draw	6,700	01/01/82		7.7s	1.6s	3.2s
Taylor Canyon	6,200	01/04/82	17	3.6	0.0	2.1
EASTERN NEVADA						
Berry Creek	9,100	01/01/82		5.3s	3.5s	6.4s
Ward Mountain #2	7,400	01/01/82		3.8s	3.6s	3.8s
HUMBOLOT						
Big Creek Summit	8,700	01/01/82		2.5s	1.7s	5.4s
Buckskin, Lower	6,700	01/01/82		5.0s	2.1s	3.6s
Corral Canyon	8,500	01/01/82		4.9s	2.9s	5.0s
Dorsey Basin	8,100	01/01/82		8.1s	2.7s	5.5s
Fry Canyon	6,700				2.2	3.2
Granite Peak	7,800	01/01/82		14.8s	3.6s	7.6s
Lamance Creek	6,000	01/01/82		9.8s	0.7s	4.4s
Lamoille #3	7,700	01/01/82		7.4s	1.7s	5.0s
Rodeo Flat	6,800				1.4	2.3
Tremewan Ranch	5,700	01/04/82	10	2.3	0.0	1.0

* Less than 15 year record
s SNOTEL provisional
NR No Report to date

NOTE:
All averages based on 1963-77, 15 year period.

SNOW COURSE MEASUREMENTS

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average †

DESERT RESEARCH INSTITUTE MEASUREMENTS

TAHOE-TRUCKEE BASIN

Alder Creek	6,960				4.6	---
Apollo Way	7,300	01/01/82	22	4.4	0.0	---
Bennett Flat	6,200				0.0	---
Brockway Summit	7,200					---
Clear Creek	5,700					---
Cliff Ranch, Franktown	5,250					---
Davis Creek	5,160				0.0	---
Evergreen Hills	5,700	01/01/82	7	0.9	0.0	---
Fuller Lake	6,200					---
Galena Creek	7,440				0.0	---
Hennes Pass Junction	6,410				1.3	---
Hobart Mills	5,850				0.0	---
Incline Lake	8,000	01/01/82	48	13.8	1.7	---
Jones Creek	6,000	01/01/82	6	0.7	0.0	---
Junction 395 & Nevada 27	4,590	01/01/82	0		---	---
Lancer	5,110	01/01/82	1	0.2	---	---
Little Valley	6,540					---
Mount Rose Resort	8,280	01/01/82	71	23.0	5.2	---
North Star Fire Department	6,320				0.0	---
RNR Forestry Site	6,400	01/01/82	14	1.8	0.0	---
Reindeer Lodge	7,060	01/01/82	15	1.9	---	---
Sagehen Creek	6,340					---
Sky Tavern	7,620	01/01/82	33	8.1	3.3	---
Slide Mountain	9,650					---
Spooner Summit	7,620				0.2	---
Squaw Valley Fire Department	6,240				0.0	---
Tahoe City	6,240				0.0	---
Tahoe Meadows	8,540	01/01/82	92	32.2	6.9	---
Tamarack Lake	8,820	01/01/82	90	32.1	5.4	---
Third and Incline Creeks	6,235	01/01/82	4	0.9	0.0	---
Thunder Cliff	6,200				0.0	---
Truckee-Tahoe Airport	5,900				0.0	---
Whites Creek	5,670				0.0	---

† 1963-1977 period.

PRECIPITATION (Inches)

BASIN AND PRECIPITATION GAGE LOCATION	ELEVATION	PERIOD OF MEASUREMENT	CURRENT RECORD		PAST RECORD
			ACCUM. PRECIP. FOR THE PERIOD	ACCUM. PRECIP. SINCE 10/1/81	ACCUM. PRECIP. PREVIOUS YEAR
TAHOE-TRUCKEE					
Big Meadows	8,300	10/1/81 to 10/31/81	4.2	4.2	-----
		11/1/81 to 11/30/81	11.0	15.2	-----
		12/1/81 to 12/31/81	9.3	24.5	-----
Echo Peak (CA)	7,800	10/1/81 to 10/31/81	5.6	5.6	2.4
		11/1/81 to 11/30/81	16.5	22.1	5.3
		12/1/81 to 12/31/81	17.4	39.5	8.6
Fallen Leaf (CA)	6,240	10/1/81 to 10/31/81	4.7	4.7	1.0
		11/1/81 to 11/30/81	14.0	18.7	1.9
		12/1/81 to 12/31/81	13.3	32.0	4.9
Hagan's Meadow (CA)	8,000	10/1/81 to 10/31/81	3.0	3.0	1.0
		11/1/81 to 11/30/81	7.8	10.8	1.6
		12/1/81 to 12/31/81	8.2	19.0	4.0
Heavenly Valley (CA)	8,800	10/1/81 to 10/31/81	3.9	3.9	0.8
		11/1/81 to 11/30/81	8.7	12.6	1.8
		12/1/81 to 12/31/81	7.1	19.7	4.6
Independence Camp (CA)	7,000	10/1/81 to 10/31/81	4.0	4.0	0.9
		11/1/81 to 11/30/81	14.9	18.9	2.6
		12/1/81 to 12/31/81	11.5	30.4	5.2
Independence Creek (CA)	6,500	10/1/81 to 10/31/81	4.6	4.6	0.9
		11/1/81 to 11/30/81	16.9	21.5	2.0
		12/1/81 to 12/31/81	12.3	33.8	4.4
Independence Lake (CA)	8,450	10/1/81 to 10/31/81	4.9	4.9	1.7
		11/1/81 to 11/30/81	16.0	20.9	3.2
		12/1/81 to 12/31/81	12.7	33.6	8.0
Marlette Lake	8,000	10/1/81 to 10/31/81	4.0	4.0	1.4
		11/1/81 to 11/30/81	10.0	14.0	3.3
		12/1/81 to 12/31/81	7.4	21.4	5.3
Mt. Rose	9,000	10/1/81 to 10/31/81	4.2	4.2	1.2
		11/1/81 to 11/30/81	10.3	14.5	3.3
		12/1/81 to 12/31/81	8.3	22.8	6.6
Mt. Rose Ski Area	8,850	10/1/81 to 10/31/81	6.5	6.5	1.2
		11/1/81 to 11/30/81	19.3	25.8	3.0
		12/1/81 to 12/31/81	17.5	43.3	7.9
Rubicon #2 (CA)	7,500	10/1/81 to 10/31/81	5.1	5.1	1.1
		11/1/81 to 11/30/81	16.2	21.3	3.0
		12/1/81 to 12/31/81	12.7	34.0	5.8
Squaw Valley Gold Coast (CA)	7,800	10/1/81 to 10/31/81	8.2	8.2	2.1
		11/1/81 to 11/30/81	23.7	31.9	5.6
		12/1/81 to 12/31/81	24.3	56.2	10.4
Tahoe City Cross (CA)	6,750	10/1/81 to 10/31/81	4.7	4.7	1.5
		11/1/81 to 11/30/81	15.6	20.3	3.0
		12/1/81 to 12/31/81	13.9	34.2	5.7
Truckee #2 (CA)	6,400	10/1/81 to 10/31/81	4.2	4.2	0.2
		11/1/81 to 11/30/81	13.8	18.0	1.2
		12/1/81 to 12/31/81	11.4	29.4	3.4
Ward Creek #3 (CA)	6,750	10/1/81 to 10/31/81	10.2	10.2	1.4
		11/1/81 to 11/30/81	28.6	38.8	4.4
		12/1/81 to 12/31/81	23.0	61.8	9.8
CARSON-WALKER					
Blue Lakes (CA)	8,000	10/1/81 to 10/31/81	5.5	5.5	1.3
		11/1/81 to 11/30/81	12.2	17.7	3.2
		12/1/81 to 12/31/81	11.7	29.4	6.4

PRECIPITATION (Inches)

BASIN AND PRECIPITATION GAGE LOCATION	ELEVATION	PERIOD OF MEASUREMENT	CURRENT RECORD		PAST RECORD
			ACCUM. PRECIP. FOR THE PERIOD	ACCUM. PRECIP. SINCE 10/1/81	ACCUM. PRECIP. PREVIOUS YEAR
CARSON-WALKER (contd.)					
Ebbetts Pass #2 (CA)	8,700	10/1/81 to 10/31/81	6.1	6.1	1.4
		11/1/81 to 11/30/81	13.0	19.1	2.7
		12/1/81 to 12/31/81	13.4	32.5	7.9
Leavitt Meadows (CA)	7,200	10/1/81 to 10/31/81	5.3	5.3	1.1
		11/1/81 to 11/30/81	9.3	14.6	3.0
		12/1/81 to 12/31/81	6.8	21.4	6.1
Lobdell Lake (CA)	9,200	10/1/81 to 10/31/81	3.2	3.2	1.0
		11/1/81 to 11/30/81	4.8	8.0	2.1
		12/1/81 to 12/31/81	3.3	11.3	5.0
Pine Nut Creek (CA)	6,600	10/1/81 to 10/31/81	6.7	6.7	-----
		11/1/81 to 11/30/81	3.3	10.0	-----
		12/1/81 to 12/31/81	0.6	10.6	1.9 *
Poison Flat (CA)	7,900	10/1/81 to 10/31/81	4.2	4.2	1.1
		11/1/81 to 11/30/81	8.3	12.5	2.2
		12/1/81 to 12/31/81	N/R	N/R	4.0
Sonora Pass Bridge (CA)	8,800	10/1/81 to 10/31/81	4.7	4.7	0.7
		11/1/81 to 11/30/81	7.8	12.5	2.0
		12/1/81 to 12/31/81	9.0	21.5	4.7
Spratt Creek (CA)	6,080	10/1/81 to 10/31/81	3.9	3.9	1.0
		11/1/81 to 11/30/81	10.5	14.4	2.0
		12/1/81 to 12/31/81	7.7	22.1	5.2
Virginia Lakes Ridge (CA)	9,200	10/1/81 to 10/31/81	3.1	3.1	0.4
		11/1/81 to 11/30/81	5.2	8.3	1.4
		12/1/81 to 12/31/81	5.1	13.4	4.0
Wet Meadows #2 (CA)	8,050	10/1/81 to 10/31/81	6.1	6.1	1.5
		11/1/81 to 11/30/81	13.2	19.3	2.0
		12/1/81 to 12/31/81	11.9	31.2	7.3
HUMBOLDT					
Big Creek Summit	8,700	10/1/81 to 10/31/81	1.6	1.6	1.0
		11/1/81 to 11/30/81	0.5	2.1	2.2
		12/1/81 to 12/31/81	3.1	5.0	2.7
Buckskin, Lower	6,700	10/1/81 to 10/31/81	3.3	3.3	1.3
		11/1/81 to 11/30/81	5.9	9.2	3.5
		12/1/81 to 12/31/81	4.8	14.0	5.2
Corral Canyon	8,500	10/1/81 to 10/31/81	3.6	3.6	0.9
		11/1/81 to 11/30/81	1.4	5.0	2.8
		12/1/81 to 12/31/81	5.5	10.5	4.2
Dorsey Basin	8,100	10/1/81 to 10/31/81	3.7	3.7	1.9
		11/1/81 to 11/30/81	1.8	5.5	4.1
		12/1/81 to 12/31/81	8.8	14.3	5.4
Fry Canyon	6,700	10/1/81 to 01/05/82	-----	-----	4.5
Granite Peak	7,800	10/1/81 to 10/31/81	2.9	2.9	2.0
		11/1/81 to 11/30/81	7.2	10.1	4.5
		12/1/81 to 12/31/81	7.4	17.5	6.1
Green Mountain	8,000	10/1/81 to 10/31/81	4.3	4.3	-----
		11/1/81 to 11/30/81	1.3	5.6	-----
		12/1/81 to 12/31/81	7.4	13.0	-----
Lamance Creek	6,000	10/1/81 to 10/31/81	4.2	4.2	1.2
		11/1/81 to 11/30/81	7.8	12.0	3.6
		12/1/81 to 12/31/81	8.5	20.5	5.2
Lamoille #3	7,700	10/1/81 to 10/31/81	2.7	2.7	1.1
		11/1/81 to 11/30/81	2.5	5.2	3.3
		12/1/81 to 12/31/81	7.8	13.0	4.3
* 10/1/81 to 12/31/81					

PRECIPITATION (Inches)

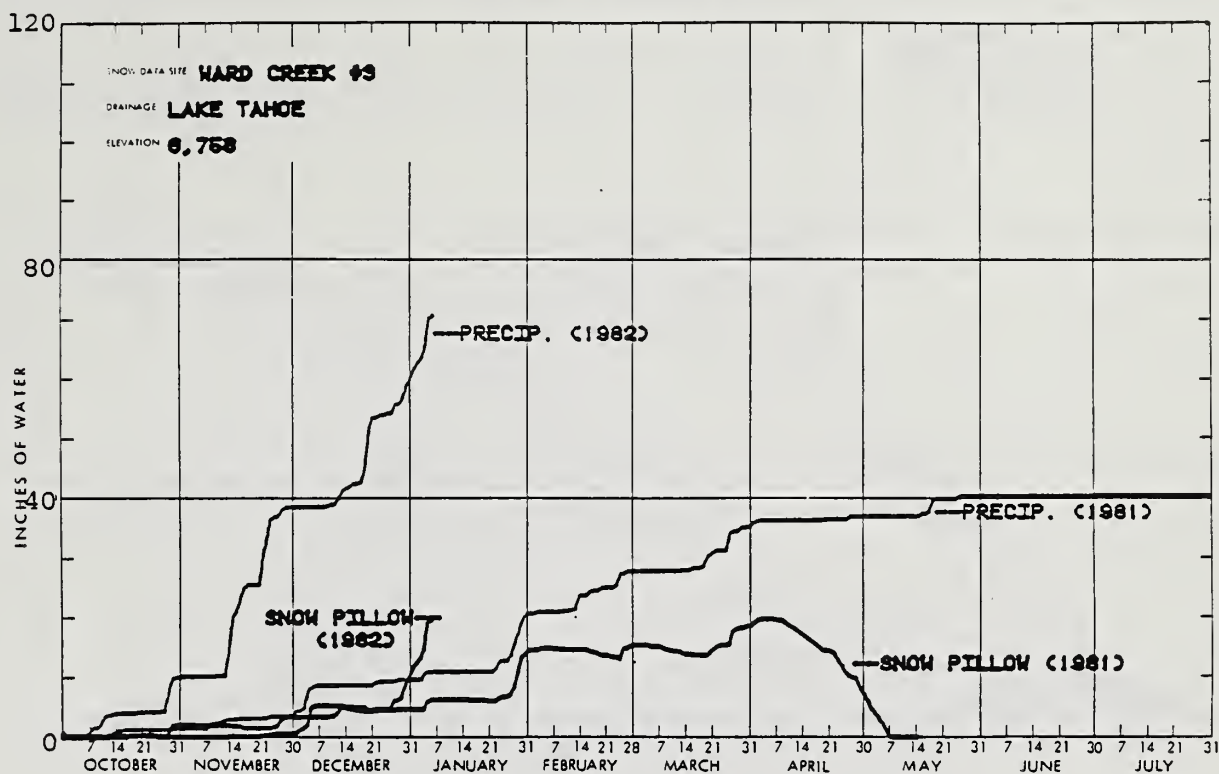
BASIN AND PRECIPITATION GAGE LOCATION	ELEVATION	PERIOD OF MEASUREMENT	CURRENT RECORD		PAST RECORD
			ACCUM. PRECIP. FOR THE PERIOD	ACCUM. PRECIP. SINCE 10/1/81	ACCUM. PRECIP. PREVIOUS YEAR
<u>SNAKE-OWYHEE</u>					
Bear Creek	7,300	10/1/81 to 10/31/81	2.6	2.6	1.5
		11/1/81 to 11/30/81	4.0	4.6	3.9
		12/1/81 to 12/31/81	11.1	15.7	6.1
Big Bend	6,700	10/1/81 to 10/31/81	1.2	1.2	0.7
		11/1/81 to 11/30/81	3.1	4.3	1.9
		12/1/81 to 12/31/81	5.5	9.3	3.2
Fawn Creek	7,000	10/1/81 to 10/31/81	2.9	2.9	2.1
		11/1/81 to 11/30/81	5.0	7.9	5.0
		12/1/81 to 12/31/81	9.1	17.0	7.1
Goat Creek	8,300	10/1/81 to 10/31/81	2.3	2.3	0.9
		11/1/81 to 11/30/81	3.9	6.2	2.4
		12/1/81 to 12/31/81	8.1	14.3	4.3
Jack Creek #2, Upper	7,250	10/1/81 to 10/31/81	2.9	2.9	1.9
		11/1/81 to 11/20/81	4.7	7.6	4.6
		12/1/81 to 12/31/81	9.2	16.8	6.7
Jacks Peak	8,420	10/1/81 to 10/31/81	3.5	3.5	-----
		11/1/81 to 11/30/81	5.9	9.4	-----
		12/1/81 to 12/31/81	11.6	21.0	-----
Laurel Draw	6,700	10/1/81 to 10/31/81	2.1	2.1	1.3
		11/1/81 to 11/30/81	4.1	6.2	3.4
		12/1/81 to 12/31/81	9.4	15.6	5.6
Pole Creek Ranger Station	8,330	10/1/81 to 10/31/81	1.5	1.5	0.9
		11/1/81 to 11/30/81	2.2	3.7	2.3
		12/1/81 to 12/31/81	4.5	8.2	3.4
Seventy-Six Creek	7,100	10/1/81 to 10/31/81	1.3	1.3	0.8
		11/1/81 to 11/30/81	2.9	4.2	2.4
		12/1/81 to 12/31/81	7.3	11.5	3.8
Taylor Canyon	6,200	10/1/81 to 10/31/81	1.2	1.2	0.3
		11/1/81 to 11/30/81	2.7	3.9	0.9
		12/1/81 to 12/31/81	3.7	7.6	1.6
<u>EASTERN NEVADA</u>					
Berry Creek	9,100	10/1/81 to 10/31/81	6.8	6.8	0.8
		11/1/81 to 11/30/81	0.5	7.3	2.2
		12/1/81 to 12/31/81	2.6	9.9	4.2
Hole-In-Mountain	7,900	10/1/81 to 10/31/81	1.9	1.9	-----
		11/1/81 to 11/30/81	3.7	5.6	-----
		12/1/81 to 12/31/81	N/R	N/R	-----
Ward Mountain	8,900	10/1/81 to 10/31/81	6.6	6.6	0.7
		11/1/81 to 11/30/81	0.4	7.0	2.0
		12/1/81 to 12/31/81	1.3	8.3	4.1
<u>NORTHERN GREAT BASIN</u>					
Cedar Pass (CA)	7,100	10/1/81 to 10/31/81	5.6	5.6	2.5
		11/1/81 to 11/30/81	7.3	12.9	4.9
		12/1/81 to 12/31/81	8.6	21.5	6.9
Disaster Peak	6,500	10/1/81 to 10/31/81	2.3	2.3	0.1
		11/1/81 to 11/30/81	5.7	8.0	2.0
		12/1/81 to 12/31/81	7.4	15.4	4.4
Dismal Swamp #2 (CA)	7,050	10/1/81 to 10/31/81	7.8	7.8	2.0
		11/1/81 to 11/30/81	11.2	19.0	5.0
		12/1/81 to 12/31/81	14.6	33.6	10.4
SNOTEL Provisional					

PRECIPITATION (Inches) FOR DECEMBER 1981 - NATIONAL WEATHER SERVICE

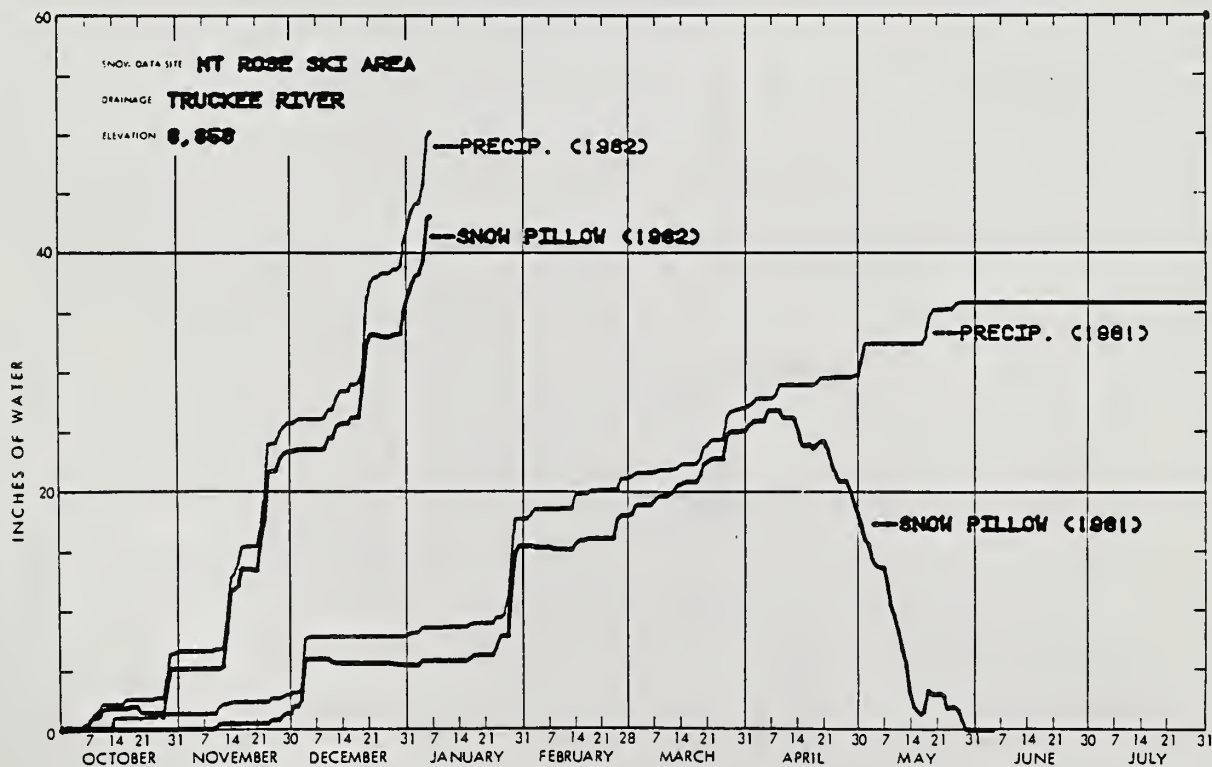
DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	CURRENT INFORMATION			FROM 1941 TO 1970		
		Month's Precip.	Last Year	*Normal	This Year	Last Year	*Normal
<u>TRUCKEE-TAHOE</u>							
Boca	5,575	5.72	1.70	3.39	17.43	2.99	7.90
Glenbrook	6,350	2.92	1.25	3.08	11.32	2.98	6.29
Incline Village	6,550	6.53	1.21	3.27	17.58	2.30	6.69
Reno	4,404	1.05	.60	1.09	3.32	1.02	2.19
Sierraville	4,975	9.23	2.91	4.89	27.62	4.14	10.65
Tahoe City	6,230	11.76	2.91	6.35	30.34	5.24	12.46
Truckee Ranger Station	5,995	3.46	2.35	6.14	24.63	4.34	11.93
<u>CARSON-WALKER</u>							
Bridgeport Ranger Station	6,560	.65	1.37	1.31	4.15	2.06	4.22
Carson City	4,651	2.24	.82	2.23	6.44	1.72	4.27
Fallon Experiment Station	3,965	.08	.06	.39	1.21	.46	1.15
Hawthorne	4,215	.02	.20	.22	.94	1.19	1.08
Minden	4,720	1.42	.60	1.54	3.44	1.00	3.03
Twin Lakes	7,329	10.96	3.38	3.59	29.07	5.40	17.29
Woodfords	5,971	4.38	2.14	3.96	15.14	3.10	8.16
Yerington	4,375	.02	.48	.60	1.11	1.00	1.48
<u>HUMBOLDT</u>							
Austin	6,605	.73	.04	1.08	2.29	1.27	3.00
Battle Mountain	4,530	.22	.28	.77	1.95	1.23	2.12
Deeth	5,338	3.23	.51	.91	5.72	1.61	2.09
Elko	5,075	3.14	.21	1.13	4.37	1.02	2.80
Emigrant Pass	5,755	2.18	.35	1.33	4.21	1.07	3.29
Jiggs	5,760						
Lamoille	5,800						
Lovelock FAA	3,900	.29	.16	.40	1.82	.51	1.31
North Fork	6,600	4.90	.26	1.18	*	1.28	2.86
Paradise Valley	4,675	3.98	.62	1.19	8.61	1.58	2.77
Wells	5,650						
Winnemucca	4,301	1.64	.25	.94	4.12	1.04	2.56
<u>SNAKE-OWYHEE</u>							
Contact	5,365	1.89	.52	.74	4.55	.35	1.82
Mountain City	5,620	2.60	.62	*	5.80	2.52	*
Owyhee	6,491	*	.73	1.59	*	3.00	3.98
Tuscarora	6,170	4.40	.71	1.63	8.79	2.31	4.02
<u>EASTERN NEVADA</u>							
Arthur	6,280	4.90	.51	1.53	7.01	1.57	4.10
Ely	6,253	.26	1.12	.71	4.10	2.04	1.97
Montello	4,880	1.07	.11	.61	2.63	.54	1.82
Paduop	6,030	3.21	.49	*	5.86	1.28	*
Ruby Lake	6,012	3.82	.67	1.59	6.47	2.05	3.72
<u>NORTHERN GREAT BASIN</u>							
Alturas Ranger Station	4,400	2.10	1.10	1.65	6.71	2.02	4.26
Cedarville	4,670	2.97	.84	2.77	10.55	2.23	5.23
Ft. Bidwell	4,498	5.14	2.02	2.43	12.03	4.05	5.50
Orovada	4,310	1.42	.34	1.16	4.95	1.74	3.18
Susanville	4,148	2.51	1.38	2.64	11.22	2.30	5.49
<u>CENTRAL-GREAT BASIN</u>							
Tonopah	5,426	T	.07	.84	2.41	.11	1.01
<u>LOWER COLORADO RIVER</u>							
Caliente	4,402	T	T	.94	.95	.85	2.43
Las Vegas	2,162	0.00	0.00	.37	.44	.05	1.02
Pioche	6,165	.05	.01	1.47	1.42	.62	3.53
Bishop	4,118	.11	1.25	1.05	1.50	1.33	1.39
* Not Available T Trace							
Normals are for 30 year period of 1941-1970.							

SNOTEL MEASUREMENTS

MSB-R13C

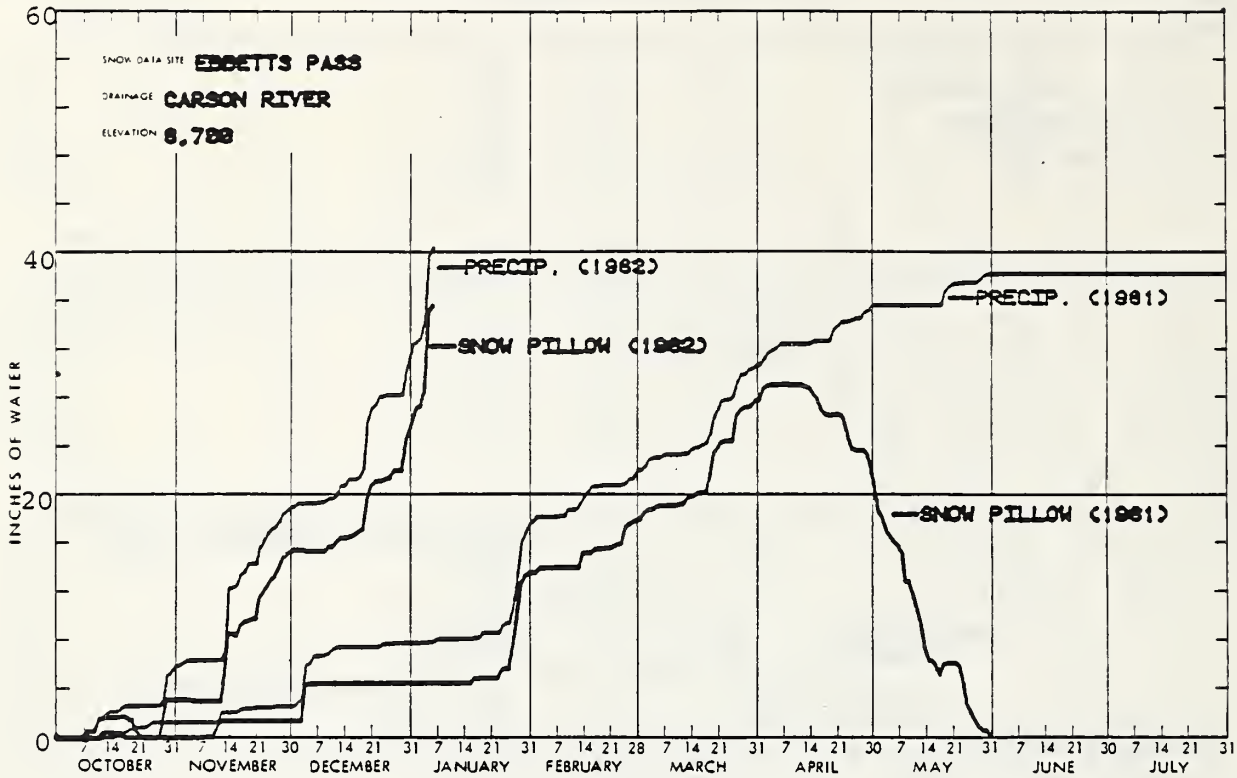


MSB-R13C

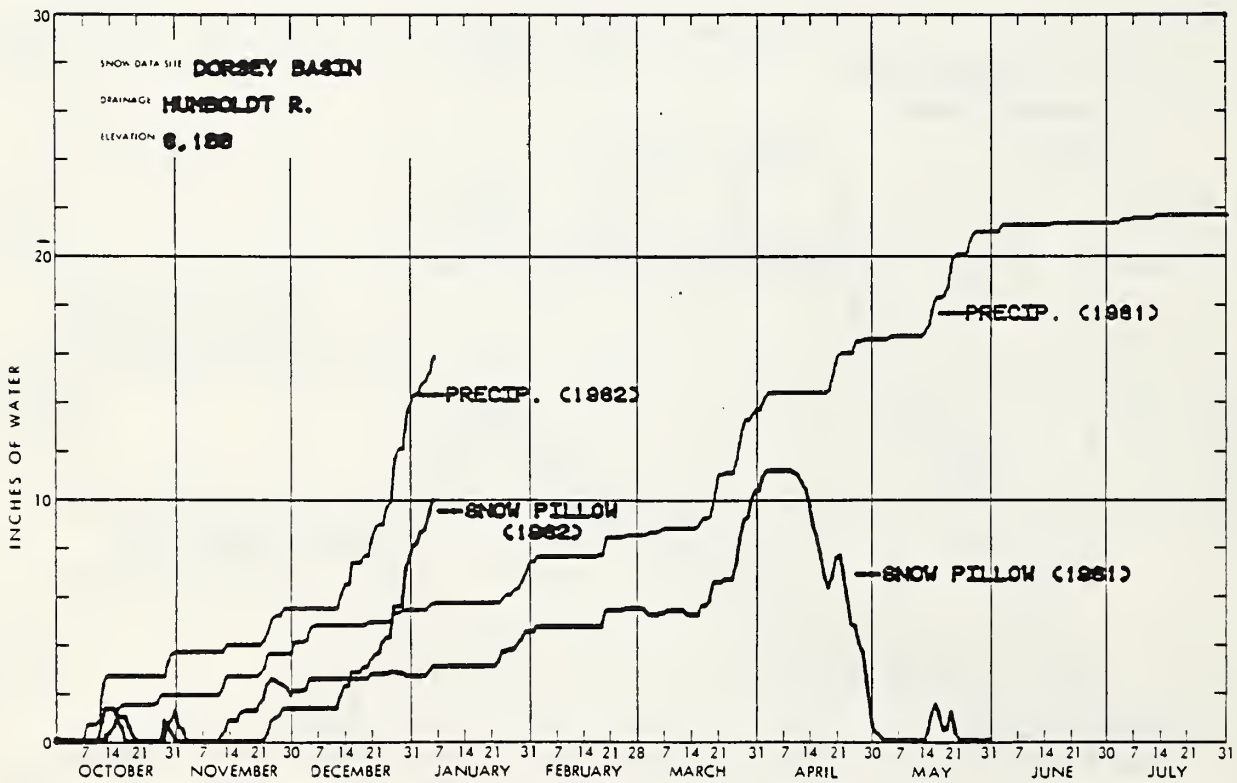


SNOTEL MEASUREMENTS

WSPB-8128



WSPB-8128



AGENCIES COOPERATING IN COLLECTING DATA CONTAINED IN THIS BULLETIN

FEDERAL

Agricultural Research Service
Bureau of Reclamation
Fish and Wildlife Service
Forest Service
Geological Survey
Soil Conservation Service
U. S. District Court - Federal Water Master
NOAA, National Weather Service

STATE

California Cooperative Snow Surveys
California Department of Parks and Recreation
California Department of Water Resources
Colorado River Commission of Nevada
Idaho Cooperative Snow Surveys
Nevada Association of Conservation Districts
Nevada Department of Conservation & Natural Resources
 Division of Water Resources
 Nevada State Forester
Oregon Cooperative Snow Surveys
University of Nevada, Desert Research Institute
Utah Cooperative Snow Surveys
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PRIVATE

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Kennecott Copper Corporation
Nevada Irrigation District
Owyhee Project North Board of Control
Owyhee Project South Board of Control
Pacific Gas and Electric Company
Pershing County Water Conservation District
Sierra Pacific Power Company
Truckee - Carson Irrigation District
Walker River Irrigation District
Washoe County Water Conservancy District

Other organizations and individuals furnish valuable information for the snow survey reports. Their cooperation is gratefully acknowledged.

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